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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,793	05/29/2001	James Chow	00-S-206	7718

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EXAMINER	
NGUYEN, HAI L	
ART UNIT	**PAPER NUMBER**
2816	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/867,793	Applicant(s) CHOW ET AL.	
	Examiner Hai L. Nguyen	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 May 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-11,13-23 and 25-27* is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☒ Claim(s) *12,24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 2, 12, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "about"; in claims 2, 12 and 24; are relative terms, which renders the claim indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Therefore, the term "about" is indefinite for the same reason "relatively shallow" was held to be indefinite by the Board of Appeals, i.e., it is not clear what applicant intends to cover by the term "about" when referring to a percentage that is about 95% or 5%. See Ex parte Oetiker, 23 USPQ2d 641 (Bd. Pat. App & Inter. 1992). MPEP 2173.05(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (US 6,326,826).

Lee et al. discloses in Fig.1 a circuit inherently comprising the steps of generating a first current signal (output signal of 15) representative of a lock condition of a phase lock loop between a clock in signal (REF_CK) and a VCO signal (CK[7]); generating a second current signal (output signal of 15) representative of a phase comparison between the clock in signal and a delay line output signal (CK[1:7]); mixing the first current signal and the second current signal resulting in a combined current signal; and providing the combined current signal to a bias input of the delay line to adjust the speed of at least one delay line element in the delay line thereby adjusting the relative timing position of the delay line output signal from the delay line (11).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al.

With regard to claim 2, the above discussed the inherent method of Lee et al. meets all of the claimed limitations except for the limitation that the steps of weighting the first current signal by about 95%; weighting the second current signal by about 5%. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to set the percentage

of the first and second current signals to meet the specific condition of the particular application. It has been held that discovering an optimum range or to optimally match to an application is obvious to the skilled artisan. See *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. in view of Krzyzkowski (US 6,131,168).

Fig.1 of Lee et al. further inherently comprises the step of providing a plurality of strobe output signals (CK[1] - CK[7]) from the delay line (11). The reference circuit meets all the claimed limitations except for a step of adjusting the individual timing positions of each of the strobe output signals. Krzyzkowski teaches in Figs.2-3 a circuit inherently having the steps of providing a plurality of strobe output signals (53a, 53b, 53c, 53d) from the delay line (47a –47d); and adjusting (49a, 49b, 49c, 49d) the individual timing positions of each of the strobe output signals as recited in the claim. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement the step of adjusting the individual timing positions of each of the strobe output signals taught by Krzyzkowski in Fig.1 Lee et al. for the advantage of reducing error in a delay locked loop.

Allowable Subject Matter

8. Claims 4-11, 13-23, and 25-27 are allowed.

9. Claims 12 and 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art of record does not disclose or suggest an electronic system, as recited in claims 4 and 16, comprising a first timing signal input (704 in instant Fig.7); a phase lock loop (708-716); and specifically the limitation directed to a delay line (702); a bias adjust circuit (726); and a phase detector circuit (720), the phase detector circuit for coupling a phase compare signal from the phase detection output to the first bias input, the phase compare signal being based on the compared phase between signals (704, 706) at the first and second phase detection inputs, and wherein the first timing signal input and the delay line output are electrically coupled to the first and second phase detection inputs, and wherein the phase lock output signal is electrically coupled to the second bias input (725), the bias output of the bias adjust circuit being electrically coupled to the delay line bias input to provide a bias signal (727) to the delay line.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For example, Tucci (US 5,097,489) is cited as of interest because it discloses a method for incorporating window strobe in a data synchronizer.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 703-306-9178. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

HLN
November 8, 2003

TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800